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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,197	11/26/2001	Thomas Reisinger	GR 99 P 1915	8423

7590 09/11/2003

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EXAMINER

KIM, KEVIN

ART UNIT PAPER NUMBER

2634

DATE MAILED: 09/11/2003

16

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/994,197

Applicant(s)

REISINGER ET AL.

Examiner

Kevin Y Kim

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 14, 2003 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1,2,11 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Kay (US 5,983,112).

Kay discloses a radio communication system comprising the steps of repeatedly transmitting a message in different time slots, where a second and a third transmission is implemented on different carrier frequencies. See col.2, lines 54-65. The different frequencies are changed only within one single transmission channel. See col.1, lines 48-50. The preamble reciting a use in "a radio access control system" is not given patentable weight since it merely calls for a field of use.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kay (US 5,983,112) as applied to claim 1 above and in view of Shanbhag (US 6,314,125).

Kay discloses all the subject matter claimed except for “applying spreading to the data message by a predefined spread sequence.” Shanbhag teaches that spreading data message is well known in the art for combining, transmitting and separation of message signals, i.e., an efficient utilization of frequencies without interference. Thus, it would have been obvious to one skilled in the art at the time the invention was made to apply a spreading code to the message of Kay for the purpose of separating message signals without interference from other signals transmitted on the same frequencies.

6. Claims 4,5,7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kay (US 5,983,112) in view of Shanbhag (US 6,314,125) as applied to claim 1.

Kay discloses all the subject matter claimed, as explained above in connection with claim 3, but is silent on specific carrier frequencies or data rates. Thus, it can not be ascertained whether or not the difference between the carrier frequencies is in an order of magnitude of a data rate of the data message as claimed in claim 4 or in a range between one quarter and two times a data rate of the data message as claimed in claim 5. However, it is noted that a selection of carrier frequencies and data rate of the data is a matter of design choice, it would have been obvious to one skilled in the art at the time the invention was made to select carrier frequencies and data rate that have the claimed relation between them particularly because applicant have

failed to disclosed such relationship between carrier frequencies and data rate solves any stated problems or is for any particular purposes.

7. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kay as applied to claim 1.

Kay discloses all the subject matter claimed but is silent on a tolerance range of carrier frequencies, it would have been obvious to one skilled in the art at the time the invention was made to set the tolerance of the carrier frequencies of Kay reasonably low, i.e., "not more than $\pm 10\%$ " because it is a well established engineering principle to have a low tolerance in order to provide stable carriers.

8. Claims 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kay.

Consider claims 12, 13, 16 and 17. Kay discloses all the subject matter, as explained in connection with claim 1, except for showing the specifics of the frequency generator that generates a plurality of different carrier frequencies. Referring to Fig.2, McCaslin teaches a crystal oscillator and at least one capacitor as a way of producing different carrier frequencies. Thus, it would have been obvious to one skilled in the art the time the invention was made to substitute the capacitor network including the crystal oscillator taught by McCaslin for the frequency generator of Kay. Additionally with respect to claim 16, all the frequencies selectively changed during transmission "occurs within one signal transmission channel" because all the different carrier frequencies are used in one transmission medium.

Regarding claims 14 and 18 since the carrier frequencies of Kay are changed in a predefined way, the switches 42 in the combination of Kay and McCaslin, as described above, would have obviously programmed.

Regarding claims 15 and 19 further calling for a carrier frequency control device, Kay teaches using a plurality of frequencies, as explained above, implying that a frequency selecting circuit would have been connected to the capacitor network comprised of capacitors and switches, functioning as the carrier frequency generator, in the combination described above.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ragan et al teach a combination of time, space, frequency diversity transmission.

Tsujimoto teaches spreading time diversity signals.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y Kim whose telephone number is 703-305-4082. The examiner can normally be reached on 8AM --5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

kvk


STEPHEN CHIN
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